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ABSTRACT

The overall effectiveness of national family planning programs in developing countries is most likely to be achieved in countries where a strong, stable political system has been the major vehicle in sustained efforts of modernization and development. In this context, a study of 30 non-Communist developing countries during 1960-1975 shows that a country's level of political capacity (i.e., its capability to make and enforce policies for national development and to cope with the changes generated by the society in the process of modernization) has a clear and substantial effect on program performance that is independent of the level of socioeconomic development. However, the influence of political capacity is substantially greater among countries at high level of development than among those at low level. Financial aid for programs from the international community does not seem to have significant effects on program results. (RM)

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POLITICAL AND SOCIO-ECONOMIC FACTORS AND FAMILY PLANNING PROGRAMS IN DEVELOPING COUNTRIES: A CROSS-NATIONAL ANALYSIS

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INTRODUCTION

Few demographers today would doubt that the world would be better off if it had fewer people and a lower rate of population growth. This seems particularly so for the less developed countries,[1] which comprise more than two-thirds of the world's population and whose population is growing three times faster than that of the developed countries. It is thus in the less developed countries that the problem of rapid population growth is especially acute and more immediate. Most of these countries are newly independent nations since World War II, and these are the countries where the process of modernization and development has been slow. Virtually all of these countries are seeking modernization as a goal, with particular emphasis on economic development. Yet their efforts in this regard have been severely hindered by the very problem of rapid population growth.

During the decade of the 1960s, a growing number of less developed countries openly acknowledged such demographic obstacles to development, and began to adopt an anti-natalist policy and institute national family planning programs to implement the policy. More than thirty-five developing countries today have such a program with a view of curtailing rapid population growth,[2] including China and India, the two most populous countries. This means that the vast majority of the population of the developing world today live under governments which have adopted and formulated explicit national policies to reduce fertility rates.[3] The critical question remains: whether the widespread availability of such policies and programs offers a solution, and if so, to what extent they have been successful.

While there remains a doubt as to whether the family planning approach can be any solution to population control within a desirable time period, the value or effectiveness of the family planning program as a population control policy is not itself the purpose of this study (although we assume its importance.)[4] Given that the program has been widely adopted as the primary means to reduce rapid population growth among many developing countries, the purpose of the present paper is to examine the relationships between political and socio-economic factors and family planning programs in thirty selected non-Communist developing countries during the period 1960-1975. (See Appendix A for a list of countries included in this study.) Employing the cross-national/aggregate data, the present study attempts to identify the main determinants of the implementation and performance of the family planning program and to explore how they are functionally interrelated in achieving the success of the program. Our focus in this study is not on policy formation or adoption process, but rather on policy implementation and program performance. (These terms will be more specifically defined later.)

RESEARCH ON FAMILY PLANNING PROGRAMS

Research on family planning programs in the developing countries can be broadly categorized into two types by levels of analysis: case studies and cross-national, aggregate studies. Up to roughly the early 1970s, almost all studies in this area were represented by the case study approach,[5] which was basically historical and descriptive, conducted either on a single country or on a regional basis with some comparative observations. The bulk of these studies concentrated mainly on the evolution and development of family planning policies and programs in the developing countries.

While the case study approach still remains dominant in the area of population policy research, a number of aggregate studies have begun to appear in recent years which are more comparative, cross-national in perspective and more quantitatively oriented in their methods of analysis.[6] Whereas the case studies have been primarily concerned with the program development and activities in individual countries, the quantitative-oriented analyses have exclusively concentrated on issues of performance, that is, determining the conditions that can explain differential levels of program performance in the cross-national context. Inasmuch as the present study takes a macro-quantitative approach, our focus will be on the latter.

The basic aim of these aggregate studies is to evaluate the performance of the family planning program in the socio-economic context. Given the considerable variability in the overall program performance in the developing countries, the common question these studies are concerned with is: to what extent are the variations explained by the socio-economic and program input variables, both separately and together? Thus, the two major sets of independent variables are "social setting" and "program effort," to use the terms as commonly labeled in these studies. The social setting (or what one may also call "modernization" variable) includes various socio-economic and demographic factors. The program effort index[7] is composed of such program input indicators as budget, personnel, availability of services, and so on. The dependent variable is most commonly represented by program acceptor rates, measured by acceptors of contraceptive methods as a percentage of married women in the reproductive ages. The major findings of these studies are that the social setting and program effort together can provide the best predictor of program success, while each has a direct, independent effect on the program.

While some cursory observations are usually made with respect to the relevance or necessity of political factors, none of the cross-national studies on family planning programs have specifically included political variables. The neglect of political factors in these studies, however, should not be surprising and may be justified in that none of the aggregate studies in this area have been conducted by the discipline-oriented political scientists. In view of the increasing importance of the role of the state or government today in the modernization process of the developing societies, it is now incumbent upon political scientists to develop broad models which would incorporate political conditions under which population policies and programs are implemented. With growing interest in comparative policy analysis within the discipline, political scientists have already begun to consider population policy research within the conceptual scheme developed largely in the American policy literature.[8] Yet little empirical research has been carried out in such directions.

The central argument or thesis advanced in this study, then, is that if we could measure the relative capacity of political systems and combine such measures with socio-economic factors, we could explain more fully the relative success of family planning programs in the developing countries. Since "political capacity" is our key variable, the following section will be devoted to its conceptualization and operationalization. In a later section we shall present other variables included in this study.

POLITICAL CAPACITY AND POPULATION POLICY

The critical element in the modernization effort of developing countries involves the role of the government in carrying out policies and programs for national development. This is what Myrdal has called the "ideology of planning for development" in the Third World, the belief that development can be brought about or accelerated by governmental intervention.[9] Since the present study

is broadly concerned with governmental policies for modernization, the concept of political capacity will be understood in this context. Political capacity is defined here as the capability of a political system to make and enforce policies for national development, as imposed by the political leadership, and to cope with the changes generated by the society in the process of modernization.[10] This capability to perform societal functions is what every political system does maintain in varying degrees, whatever structural form it may have. Such a conceptualization emphasizes the independent and autonomous sphere of the political arena that can will and act.

It is perhaps appropriate, at this point, to briefly consider the nature of population policy as a public policy. A population reduction policy in the developing societies, where the bulk of the population lived in rural areas in the 1960s, was not a particularly popular one. The family planning policy was typically the product of political elites,[11] a successful implementation of which requires a high degree of popular acceptance and participation. In other words, the initiative in dealing with population control as a national issue must come from the political system (more specifically, the leadership) in terms of mobilizing, educating, and motivating the general population, which is not likely to see the long-range benefit of a population control program for the society as a whole. More importantly, the continuous commitment to effective implementation of such a program depends upon the long-term, stable political environment. If leaders are not secure in their power positions, they are not likely to commit themselves to the long-run demographic policy and to follow it up with necessary investment of resources and energy in pursuit of its implemertation. As one observer of the African family planning policies aptly put it: "the benefits will not appear in a manner that can vindicate the regime's decision within the time period that most regimes can

expect to hold office."[12]

What is being suggested here is that any attempt to understand and appraise the performance of population programs in modernizing societies must take into consideration their political environment or conditions. From the "modernization effort" point of view, an effective or successful political system is one that has the political capacity to create and maintain order and stability, to impose "social discipline" as well as mobilize its population for national purposes, so that it can accomplish the developmental goals to which its leaders are committed. It is in this context that our conceptualization of political capacity is particularly relevant for population policy studies in the developing countries.

We shall now turn to the operationalization of political capacity. The three indicators below are intended to represent a country's level of political capacity:

1. Executive Stability Score,[13] 1960-75
2. Direct Tax as a percentage of Central Government Revenue, Annual Average of 1970-1975
3. Central Government Revenue as a percentage of National Income, Annual Average of 1970-1975

Political capacity here is operationally defined as the combination of these three indicators. (See Appendix B for data sources.) The combined index of capacity will then be used as a single variable in our analysis.[14]

It is worth noting here that the correlations among the three empirical indicators range from 0.07 to 0.41, all being in the positive directions.[15] These generally low but positive interrelationships seem to indicate that the three dimensions of capacity, as measured by our three indicators, are more or less empirically, albeit somewhat interrelated. In other words, countries showing high scores on one dimension of capacity are not necessarily high on

other dimensions, although they tend to go in the same directions.

No claim is made that our index of political capacity is anything approaching an ideal or perfect measure of capacity. For instance, the "executive stability score" refers to the relative length of incumbency of the actual holder of executive authority in a political system. (For detailed procedures of the scoring method, see Note 13.) This, in effect, equates government durability or continuity with capacity and is certainly subject to criticism. While this approach is less appropriate to Western democratic systems, it seems to make sense for the modernizing societies where politics is more volatile and changing. Hence we consider short duration in office in the developing polities, whether caused by regular or irregular means, to result from a weak leadership, suggesting that the existing regime or leadership is not capable of coping successfully with social needs and demands.

The extent to which the other two indicators reflect the presence of political capacity is also open to criticisms. Taxation is certainly an essential ingredient of the political systems capacity to finance various social and economic programs as well as to insure an efficient operation of government. But the ability and willingness to impose and collect a given level of taxes are necessarily affected by such factors as the nature or types of the national economy or government revenue sources from other than direct taxes. While such criticisms are indeed legitimate and we may not be short on suggesting "better" indicators, the problem is that we are seriously short of actual statistical data on such indicators. This problem is particularly acute in cross-national studies of the non-Western, developing politics. Given the data limitations, our three indicators are presented here as the best available approximations of what we wish to measure.

FRAMEWORK FOR ANALYSIS

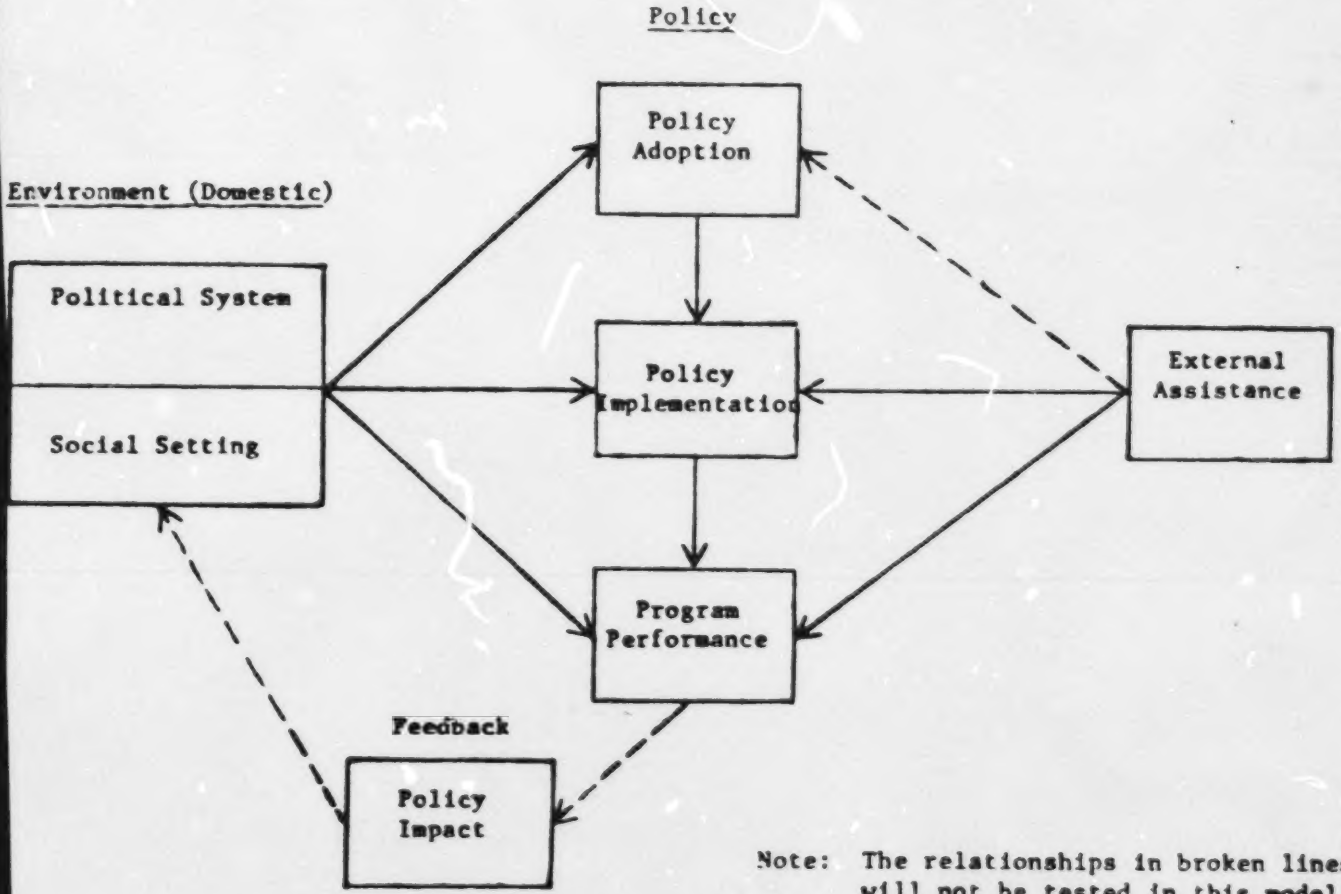
In the light of the theoretical importance of "political capacity" for our study, the previous section has been devoted to its conceptualization and operationalization. In this section we shall present the basic framework for our analysis of family planning programs. Other basic concepts will be discussed in this framework, in terms of which our hypotheses will be formulated.

Figure 1 shows in diagram our macro-analytic model for a family planning policy and program. Basically, the model is composed of two principal parts: environment (domestic) and policy. From this simplified perspective, policy is viewed as a function of environment, which is again basically composed of political system and social setting. Political capacity, as discussed in the previous section, will be our political system variable. The social setting will be represented by various social and economic variables, which will be described in the following section. "External Assistance" in the model refers to the financial assistance from the international environment for the family planning program. The external assistance is the only element of foreign environment considered in the model, and is placed separately near the policy side because of its special relationship to the family planning program.

Several points need to be mentioned regarding the policy side of the model. For purposes of our analysis, it is important to differentiate between "policy adoption," "policy implementation," and "program performance" as three conceptually distinct, albeit related, dimensions of the policy process. In this study we draw a distinction between policy and program: while the former implies the formal adoption of an explicit set of objectives by a government, the latter refers to the means and measures devised to achieve the policy objectives. The two concepts are then represented, respectively, by the adoption of "anti-natalist policy" and the implementation of "family planning programs."

FIGURE 1

A Model for the Analysis of Family Planning Policy and Program



Note: The relationships in broken lines will not be tested in this model.

We define the family planning program as "deliberate efforts, typically governmental in funding and administration, to provide birth control information and services on a voluntary basis to the target population."[16]

The distinction between policy adoption and implementation is particularly important for our study. Even if the government of a developing country is committed to a particular policy, it is often lacking in the capacity to implement the policy.[17] Indeed, this is very true for the case of population policy. For instance, India proclaimed a formal policy in 1952, but it was not until the mid-1960s that the government began to commit itself to actual implementation in terms of necessary investment of resources and energy. Therefore, the implementation of policy becomes a crucial stage of the population policy process in the developing countries.

The last element in the policy category of our model is "program performance," which is our dependent variable. Program performance (or outcome) here refers to the level of contraceptive services delivered by the family planning program to the target population. This level of program performance will also be referred to in this study as the degree of program success or effectiveness. It seems that the degree of program performance or success is most likely to be affected by policy adoption and implementation. However, this relationship may not necessarily occur as expected. It is therefore necessary to make an analytical distinction between the three dimensions of the policy process, and to measure them independently so as to test the assumed relationships between them.

"External Assistance" in the motel refers to the extent to which a country's program has been financially assisted by various international agencies and foreign governments. As shown in Figure 1, the relationship between external assistance and policy adoption will not be tested due to the lack of comparable

data. However, external assistance will be considered in our model for its relationship to both policy implementation and performance.

Finally, some comments are in order regarding "policy impact," which is differentiated from policy performance. Policy impact, depicted in broken lines in the model, refers to the ultimate impact of the family planning program on the declines in fertility rates in a given population. The policy impact will not be tested in our model, because the appropriate measures of the ultimate impact of the programs on fertility declines still remains a problem.[18] The high level of program performance (i.e., the high rates of contraceptive addeptance delivered by the program) may not necessarily produce significant "ultimate impacts." This remains to be an empirical question, which will not be tested in this study.

The remainder of this section will present a set of hypotheses to be tested. They are basically derived from the above model. In addition to these hypotheses, we shall explore other relationships not hypothesized here but which come to our attention in the course of data analysis. The hypotheses below are organized into two categories: Category A focuses on the relationship between environment and policy; category B deals with the relationship among the three policy dimensions and external assistance.

A. Environment and Policy:

1. Political capacity is positively related to both policy implementation and performance: that is, the higher a country's level of political capacity, the stronger its internal commitment to the program and the more successful the program.

2. The extent of the relationship described in Hypothesis 1 is, more or less, affected by the social setting: we generally expect that the positive effect of political capacity on policy implementation and performance will be greater for countries at a higher level of socio-economic development than for those at the lower level.

3. Social setting is, in general, positively related to both policy implementation and performance.

4. While there is generally a positive relationship between levels of socio-economic development and program performance, the latter is more a function of rates of socio-economic change or development than levels of development.

B. Among Policy Dimensions and External Assistance;

5. Program performance or success is more a function of actual policy implementation than of formal policy adoption.

6. Policy adoption is not directly related to program performance: to the extent that the former has any positive effect on the latter, it works through policy implementation.

7. Policy implementation is less a function of policy adoption than of political capacity and social setting.

8. External assistance is positively related to both policy implementation and performance. However, the degree to which external assistance contributes to program performance depends upon levels of political capacity and socio-economic development.

VARIABLES AND INDICATORS

Below is a list of variables and their operational indicator. All variables are measured in interval scales. Each variable is identified with a number, and this number will often be used for the variable identification in our data analysis. (For data sources for each variable, see Appendix B.)

VAR. 1: Index of Political Capacity

As described in detail in a previous section on political capacity, this index is composed of three indicators: executive stability score, government revenue as percentage of national income, and direct tax as percentage of central government revenue.

Var. 2: Composite Index of Overall Level of Socio-economic Development, circa 1973

VAR. 3: Composite Index of Overall Rate of Socio-economic Development, 1960-70/75

The two variables - Variable 2 and 3 - are designed to reflect a country's overall societal development. Variable 2 is composed of the following four development indicators: Gross Domestic Product (GDP) Per Capita, 1973; % Agricultural Population, 1970; Level of Literacy, 1970/75; Life Expectancy at Birth, 1970/75. Data on these four indicators were Z-scored, added and averaged to form a composite index of overall level of development.[19] Variable 3, which represents the overall rate of development, was constructed in a similar manner, combining the following three indicators:[20] Average Annual Growth Rates of Real GDP Per Capita, 1960-73; % Change (Decrease) in Agriculture Population, 1960-70; % Change (Increase) in Literacy, 1960/65-70/75.

Var. 4: Formal Policy Adoption Score

This refers to how early a country adopted its official anti-natalist policy. It is measured by the number of years between the year in which the policy was formally adopted and 1975.

Var. 5: The Freedman-Berelson Index of Program Effort, circa 1974

This variable, which has been directly adopted from the program effort scores as determined by Freedman and Berelson,[21] represents a country's internal commitment to the implementation of policy.

Var. 6: Extent of External Assistance to the Program

This is measured by the annual average of the total amount of aid received between 1972-1975, divided by the total number of married women of reproductive age in 1974. Reproductive age here refers usually to the ages between 15 and 44.

Var. 7: Program Acceptor Rate

This is our indicator of program performance or success. It is measured by the annual average of the total number of new acceptors of program methods between 1972 and 1975 as the percentage of the total number of the non-users among married women of reproductive age in 1974.

DATA ANALYSIS AND FINDINGS

Since this study is an attempt to explain the cross-national variation in the performance of family planning programs, the main focus in our data analysis will be on the relationship between program performance and other variables. Our analysis and findings will be presented in two parts. The first part of this section deals with the relationship between the environmental factors (both political and socio-economic) and the policy variables. In the second part we shall look at the relationship between the three policy dimensions.

A. Environment and Policy

Since the main departure of the present study from the previous research is the inclusion of political capacity in our model of analysis, it is important to see, first of all, whether political capacity has any effect on policy implementation and performance. The correlations presented in Table 1 summarize the basic patterns of relationship between political capacity and socio-economic development (hereafter referred to simply as "capacity" and "development"), on the one hand, and the policy implementation and performance on the other. Looking at the correlations in the table as a whole, two basic observations can be made. First, all the associations are in the positive directions. Secondly, all the correlations are relatively strong and statistically significant. These two basic findings--the direction and strength of the relationships--provide a strong support for our general expectation that both political capacity (Var. 1) and level of socio-economic development (Var. 2) are positively related to implementation (Var. 5) and performance (Var. 7). This is in fact what we have postulated in Hypotheses 1 and 3.

Table 1: Simple Correlations Between Capacity/Development, and Implementation/Performance

Policy	(I) Political Capacity (Var. 1)	(II) Socio-economic Development (Level) (Var. 2)
Implementation (Var. 5)	0.55	0.75
Performance (Var. 7)	0.60	0.62

Note: All four correlations in the table are statistically significant at the level of at least 0.05.

Let us first examine the relationships of policy implementation to capacity and development. The comparison between columns I and II in Table 1 makes it apparent that the level of socio-economic development is much more strongly related to implementation than political capacity is. In other words, while a country's internal commitment to its family planning program is influenced by both political capacity and socio-economic development, development appears to be the more important determinant of implementation. If we now look at how capacity and development are related to program performance (i.e., our main dependent variable), a somewhat different pattern emerges: performance, as measured by program acceptor rate, is almost equally strongly related to both capacity and development. As shown in Table 1, the difference in coefficient terms is virtually negligible: that is, only 0.02.

Our Hypothesis 2 concerns the question of whether and how the social setting affects the relationship of political capacity to implementation and performance. Controlling for development (Var. 2) which correlates 0.57 with capacity (Var. 1), the partial correlations of Var. 1 with implementation and performance (i.e., Var. 5 and 7) are 0.28 and 0.50, respectively. It thus

appears that although effects of capacity on implementation and performance are clearly reduced when the level of development is held constant, a substantial part of the original relationships still remains, particularly for performance (Var. 7). To further examine how the levels of development affect the capacity's relationship to implementation and performance, the countries were divided into two groups in terms of levels of socio-economic development,[22] and correlations for the same variables were computed for each group separately. The results are presented in Table 2 for comparison.

Table 2: Correlations Between Political Capacity and Implementation/Performance, By Levels of Development

	Capacity (Var. 1)	
	Level of Development	
	High	Low
Implementation (Var. 5)	0.59*	0.03
Performance (Var. 7)	0.53*	0.31

Note: An asterisk (*) indicates a statistically significant relationship.

The comparison of the two groups in Table 2 shows that the original relationship found in Table 1 (that is, when all countries are considered together) are significantly reduced for countries at low level of development, but not for countries at high level. It is particularly noteworthy that the effect of political capacity on implementation for the low-level countries has virtually disappeared (0.03). For the same low level countries, the capacity's effect on performance is reduced to 0.31. These findings indicate

that when a country's level of development is low, political capacity is less likely to have any effect at all on implementation. In other words, the effect of a country's level of political capacity on implementation and performance is likely to be more marked when her level of socio-economic development is relatively high.[23] However, these findings should rather be treated, in view of the smaller number of cases involved, as the tentative ones requiring further studies.

Hypothesis 4 relates to differential effects of levels and rates of development. It seems plausible to hypothesize that people in societies undergoing rapid socio-economic changes are more susceptible or receptive to the idea of changes in their life style and value. More specifically, we have hypothesized that program performance is more a function of the rate of development over time than the level of development at a given time. Table 3 presents the comparison between the "level" and "rate" indicators of development (i.e., Var. 2 and 3) with respect to their relationships to both implementation and performance of the family planning program.

Table 3: Comparison Between Level and Rate of Development with Respect to Their Relationship to Implementation and Performance

	Socio-economic Development	
	Level (Var. 2)	Rate (Var. 3)
Implementation (Var. 5)	0.75	0.43
Performance (Var. 7)	0.62	0.74

Note: All four correlations are statistically significant at the level of at least 0.05.

Comparing the two development indicators in Table 3, it is noteworthy that while implementation is more strongly related to the level of development than to the rate of development, performance is more strongly related to the rate of development than to the level. This finding makes it clear that the rate of development is the more important determinant of program performance than the level of development, as we have hypothesized.

B. The Three Policy Dimensions

So far in this section our analysis has been concerned with the relationships between environmental factors and policy dimensions. Our findings have clearly shown that both political capacity and socio-economic development (or social setting) do have important influences on policy implementation and program performance. There seems to be no significant relationship between the environment and policy adoption. (See Appendix C.) In this part of the section we shall focus on how performance is influenced by the other policy variables--that is, policy adoption and implementation. External assistance will also be considered here.

As shown in Table 4, virtually no relationship (0.08) is found between adoption (Var. 4) and performance (Var. 7). Nor is there any significant relationship between adoption and implementation (Var. 5). While there is no relationship at all between policy adoption and program performance, implementation, as measured by program effort index (Var. 5), shows the strongest relation ($r = 0.81$) to performance--stronger than political capacity and the two development variables observed earlier. The table also reveals that external assistance (Var. 6) is positively related to both implementation and performance, but both correlations are quite low.

Table 4: Correlations Among Three Policy Dimensions and External Assistance

	Var. 4	Var. 5	Var. 6	Var. 7
Var. 4	1.00			
Var. 5	0.21	1.00		
Var. 6	-0.17	0.13	1.00	
Var. 7	0.18	0.81*	0.20	1.00

Note: An asterisk (*) indicates a significant relationship.

Var. 4: Policy Adoption Score
Var. 5: Program Effort Index (Implementation)
Var. 6: External Assistance
Var. 7: Program Acceptor Rate (Performance)

It seems evident from the above findings that the success of family planning programs in the developing countries is not a function of how early an official policy is adopted, but definitely a function of the degree of its internal commitment to the program. It also appears clear that whatever effect the formal policy adoption has on implementation, it is quite insignificant. In other words, implementation is rather a function of political capacity and socio-economic environment, as our earlier findings have shown. These findings are basically consistent with our Hypotheses 5, 6, and 7. The financial assistance from international environment (Var. 6) does not seem to have any measurable effect on both implementation and performance, although the relationships are positive. This suggests that the problem of fertility reduction in the less developed countries remains basically a national task.

Since we already know that the political and socio-economic environment

has an influence on program performance, it will be interesting to see whether and how the relationship between implementation and performance is affected by differences in the environment. Controlling for the level of socio-economic development (Var. 2), the partial correlation between program effort (Var. 5) and acceptor rate (Var. 7) is 0.63: that is, the original relationship, 0.81, is reduced by 0.18. And controlling for political capacity (Var. 1), the relationship between Var. 5 and 7 is reduced from the original 0.81 to the partial 0.71. When both Var. 1 and 2 are simultaneously controlled for, the partial correlation between Var. 5 and 7 is 0.59. These findings on the partial correlations indicate that while the environment eliminates some of the effect of implementation on performance, the independent influence of implementation remains substantially strong.

To further examine the nature of the environmental effect on the relationships between implementation and performance, the countries were divided into two groups (high and low) by levels[24] of political capacity and socio-economic development, respectively, and correlations between implementation (Var. 5) and performance (Var. 7) were computed for each group, separately. The results are presented in Tables 5 and 6. External assistance (Var. 6) is also included in both tables for the same purposes of analysis.

In both tables, the relationship between implementation and performance is significant for countries at low as well as high levels. However, it will be noted that the relationship is much stronger for countries at high levels in both tables. This strongly indicates that implementation is much more closely linked to program performance in the "favorable" environment--that is, in countries whose levels of both political capacity and socio-economic development are relatively high. Particularly striking is the relationship between implementation and performance for countries at high levels of capacity, as

Table 5: Relationship Between Policy Implementation and Performance By Levels of Political Capacity

	Implementation Var. 5		External Assistance Var. 6	
	Level of Capacity		Level of Capacity	
	High	Low	High	Low
Performance Var. 7	0.92*	0.53*	-0.08	0.74*

Note: *indicates a significant relationship

Table 6: Relationship Between Policy Implementation and Performance By Levels of Development

	Implementation Var. 5		External Assistance Var. 6	
	Level of Development		Level of Development	
	High	Low	High	Low
Performance Var. 7	0.74*	0.58*	-0.03	0.69*

Note: * indicates a significant relationship.

shown in Table 5. The correlation here is 0.92, which is in sharp contrast to 0.53 for the low-level countries. Even though the number of cases for the correlation is small, such a high coefficient (0.92) does seem to indicate strongly that program performance becomes much more a function of implementation at or above certain levels of a country's political capacity.[25] In other words, it strongly suggests that, other things being equal, various program inputs are more likely to be translated into actual program results in the presence of high level of political capacity. As noted above, the level of socio-economic development has also the similar effect on the relationship between implementation and performance. But such an environmental effect seems to be much more significant with regard to political capacity than socio-economic development. While it is noteworthy that the relationship between implementation and performance is significantly increased for countries at high levels of both capacity and development, it is also important to point out again that a substantial amount of relationships still exist for countries at low levels in both tables. We can thus say that implementation does have an independent effect regardless of differences in environmental factors.

A more interesting and clearer pattern emerges in both tables with respect to the relationship between external assistance and program performance, which concerns our Hypothesis 8. The comparison of the high and low groups in Tables 5 and 6 makes it apparent that it is only in countries at low levels of capacity and development that external assistance has a significant effect on program performance. The correlations for the high-level countries in both tables are virtually zero; in contrast, the two correlations (0.74 and 0.69) for the low-level countries in both tables are three times higher than the original 0.20 as seen in Table 4. It is also to

be noted that for the low-level countries in both Tables 5 and 6, the relationship between external assistance and performance is substantially stronger than even that between implementation and performance. These findings seem to indicate that the program of a socio-economically poorer and politically weaker nation is likely to rely more on financial assistance from external sources rather than on internal program inputs for whatever measurable level of performance is achieved. The policy implication of this is that while these countries are struggling for their political and economic development, much of their effort to bring down fertility depends upon the aid-donor nations.

SUMMARY AND CONCLUSIONS

Few, if any, cross-national studies of family planning programs in the developing countries have specifically considered political variables in explaining differential levels of program performance or success. The two main categories of explanatory variables employed in previous studies were socio-economic and program input factors. In the foregoing section I have presented various findings and interpretations on the relationships between political capacity, socio-economic factors, and implementation and performance of the family planning program. In this concluding section I shall attempt to rephrase and comment on the major findings:

1. Levels of political capacity and socio-economic development both are positively associated with both implementation and performance of family planning programs in the developing countries. Particularly important to our central thesis is the finding that a country's level of political capacity does have a clear and substantial effect on program performance that is independent of the level of socio-economic development.

2. The efficacy of political capacity for both implementation and performance depends on the socio-economic environment: the influence of capacity is substantially greater among countries at high level of development than among those at low level.
3. While the level of socio-economic development is associated with program success, the latter is more likely to be achieved in countries where socio-economic changes have been rapid.
4. Regardless of levels of capacity and development, implementation shows a clear, substantial effect on performance. It also seems clear that the effect of implementation is most likely to increase in a high-capacity environment: that is, various program inputs are more likely to be translated into actual program results in the presence of high political capacity.
5. Policy adoption has hardly any effect on either policy implementation or program performance.
6. External assistance seems to be significantly related to countries only at low levels of capacity and development.

The major conclusion that can be drawn from this study is that: the overall success or effectiveness of national family planning programs in the developing countries is most likely to be achieved in countries where a strong, stable political system has been the major vehicle in sustained efforts of modernization and development.

Among the most successful family programs often cited are those of Singapore, South Korea and Taiwan. All three countries score high in terms of our index of political capacity. And these are the countries where economic planning and major modernization programs have been launched by the governments

and successfully carried out under strong, sustained political leadership. In short, in all three countries the political system has been the major actor in mobilizing, coordinating, and controlling the national resources for developmental purposes. Thus, as part of the overall development program, the family planning program in these three countries have been supported by strong political commitment and carried out in an economically more receptive environment.

The family planning effort of the developing countries, as suggested in our findings, remains basically a national task--despite the global concern over and the international implications of the problem of rapid population growth in these countries. The financial aid for the program from the international community and rich donor nations does not seem to have any significant effect on program results. The challenge confronting the governments of the developing countries is to develop new attitudes in such a sensitive, and often politically dangerous, area as birth control before rising living standards and education make the people more responsive and receptive to family planning or limitation. Our study seems to suggest that unless the present levels of socio-economic development in the developing countries are significantly raised (which is most unlikely), the success of a national family planning program depends upon the political system's capacity or will to implement and carry out the programs, as vigorously as possible, with whatever resources available.

NOTES

1. The terms, such as "developing," "less developed," or "Third World" countries, will be used interchangeably throughout this paper, referring to those countries in Asia (excluding Japan and Israel), Africa (excluding South Africa), and Latin America (excluding Argentina).

2. See D. L. Nortman and E. Hofstatter, Population and Family Planning Programs: A Compendium of Data Through 1978. A Population Council Fact Book, 10th edition (New York: The Population Council, 1980). Since 1969, the Population Council has annually published the so-called "Factbook" series, which is a compilation of useful information and basic data, by country, on family planning programs of developing countries.

3. According to one recent study, some 80 percent of the population of developing countries (including China) live under governments having anti-natalist policies. See W. B. Watson (ed.), Family Planning in the Developing World: A Review of Programs (New York: The Population Council, 1977), p. 2.

4. The "precise impact" of family planning programs on fertility decline is still a matter of uncertainty, due mainly to the difficulties in isolating the effects of changing socio-economic conditions on the fertility behavior. For a recent summary view of individual country programs and prospects, see Bernard Berelson, "Prospects and Programs for Fertility Reduction: What? Where?" Population and Development Review, V. 14, No. 4 (Dec.), pp. 579-616. For various viewpoints on the value of family planning approach, see B. Berelson, The Great Debate on Population Policy (The Population Council, 1975).

5. For instance, one survey of the literature observed 122 case studies out of 127 studies surveyed. See R. Kenneth Godwin (ed.), Comparative Policy Analysis: the Study of Population Policy Determinants in Developing Countries (Lexington, Mass.: D. C. Heath & Co., 1975), p. 12.

6. R. Freedman and B. Berelson, "The Record of Family Planning Programs," Studies in Family Planning, V. 7, No. 1 (The Population Council, 1976); P. Mauldin and B. Berelson, "Conditions of Fertility Decline in Developing Countries," ibid. (May 1978); K. S. Srikantan, The Family Planning Program in the Socioeconomic Context (The Population Council, 1977).

7. For details, see J. Lapham and P. Mauldin, "National Family Planning Programs: Review and Evaluation," Studies in Family Planning (March) (The Population Council, 1972).

8. See, for example, R. K. Godwin, op. cit. (1975).

9. See G. Myrdal, Asian Drama (New York: The Twentieth Century Fund, 1968), V. III, ch. 15.

10. The concept of political capacity as employed in this study is borrowed from the political development literature in the field of comparative politics. Particularly relevant for our purposes is Huntington's conceptualization of political development. See S. Huntington, Political Order in Changing Societies (Yale University Press, 1968). There is no point here in getting into discussions on

various definitions and conceptualizations regarding the much-disputed term "political development." What is relevant for our study is that the capacity approach to political development seems to be particularly appealing to the politics of the modernizing societies, where the most distinctive problems have been a lack of effective political authority or the slow development of political institutions.

11. For a well-documented treatment of the evolution and development of population policies in the developing countries, see Leslie Corsa and D. Oakley, Population Planning (Ann Arbor: The University of Michigan Press, 1979), ch. 5.

12. P. A. Anglim, "A View on Anti-Natalist Policies: The African Case," in Godwin, op. cit. (1975), p. 183.

13. Scoring System for Executive Stability:

    Each country is allocated a number of points for each year during the period 1960-75 as follows: (the term "leader" below refers to the actual holder of executive authority, whether President, Prime Minister, or King.)

    (a) If the same leader (hence the same party) has been in power during the whole 15-year period: 6 points for each year (i.e., the maximum of 90 points.)

    (b) If two or more different leaders but the same party or ruling group have been in power during the 15-year period:

        5 points for each of the year under the leader with the longest tenure;
        4 points for each of the years under the leader with the second longest tenure;
        3 points for each of the years under the leader with the third longest tenure; and so on.

    (c) In cases where two or more parties (hence, two or more different leaders) have been in power during the 15-year period:

        4 points for each of the years under the leader with the longest tenure;
        3 points for each of the years under the leader with the second longest tenure; and so on.

    (d) For countries which became independent after 1960, some adjustments are made: the above same procedures apply for the period after independence; and 4 points are given for each of the years between 1960 and the year of independence.

14. Since the raw data of the three indicators have different means and distributions, they are standardized into Z-scores to form a composite index of capacity. First, Z-scores are computed for each country on each of the four indicators, and then, the four Z-scores for each country are added and averaged. The average Z-score for each nation, as a single figure, represents its level of capacity, and these Z-scores are used in all statistical analyses.

15. The simple correlations among the three indicators are as follows:

	Indicators		
	(1)	(2)	(3)
(1)			
(2)	0.16		
(3)	0.41	0.07	

16. B. Berelson, "The Present State of Family Planning Programs," Studies in Family Planning, No. 57 (The Population Council, 1970) p. 1.

17. See T. B. Smith, "The Policy Implementation Process," Policy Sciences, V. 4 (1973), pp. 197-209.

18. See Note 4.

19. Since "% agricultural population" is negatively related to the other three indicators, the percentage of non-agricultural population was actually used in constructing the index.

20. The percentage change in life expectancy is not included here for lack of comparable data.

21. For procedures and actual scores of what I have labeled "Freedman-Berelson Index," see Freedman and Berelson, op. cit. (1976), Appendix A. The index was based on the 15 input criteria originally devised by Lapham and Mauldin, op. cit. (1972). The 15 input factors are given in the form of questionnaires regarding various aspects of program activities, such as the availability of services, training facilities and field workers, program evaluation effort, the degree of commitment by political leaders, and government budgeting commitment.

22. Var. 2 (Overall Level of Development) has been employed to divide the countries: 16 countries from the top of the composite scale of Var. 2 were identified as countries at the "high" level of development, and the remaining 14 countries as those at the "low" level. The reason why the two groups do not have exactly 15 countries each is that the cut-off point in the scale was made in such a manner as to avoid separating the two countries closely adjoined around the mid-point.

23. There may be a certain "threshold" level above which the relationship increases and below which it decreases. The smaller number of cases in our study, however, precludes any further analysis so as to specify that level.

24. Var. 1 and Var. 2 were used to classify the countries into two levels of capacity and development, respectively.

25. The findings here again suggest that there may be a certain "threshold" level of political capacity above which the relationship between implementation and performance becomes much stronger. Our rather small number of cases does not allow us to carry out further the analysis so as to specify the "threshold" level.

APPENDIX A

Countries Included in Our Study and Adoption Year of Anti-natalist Policy

Asia: (15 Countries)	
Bangladesh	1971
Hong Kong*	1973
India	1952
Indonesia	1968
Iran	1967
Korea (South)	1961
Malaysia	1966
Pakistan	1960
Philippines	1970
Singapore	1965
Sri Lanka	1965
Taiwan	1968
Thailand	1970
Turkey	1965

Africa: (7 Countries)	
Botswana	1970
Egypt	1965
Ghana	1969
Kenya	1966
Mauritius	1965
Morocco	1968
Tunisia	1964

Latin America: (8 countries)	
Barbados	1967
Columbia	1970
Dominican Republic	1968
El Salvador	1975
Guatemala	1975
Jamaica	1966
Mexico	1974
Trinidad & Tobago	1967

*Though not a sovereign state, Hong Kong is included for its independent policy and program.

Source: D. L. Nortman and E. Hofstatter, Population and Family Planning Programs: A Compendium of Data Through 1978 (New York: The Population Council, 1980), Table 6.

APPENDIX B

Data Sources For the Variables

I. Political Capacity Index (Var. 1):

a) Data on "Executive Stability Score" were compiled from Arthur S. Banks (ed.), Political Handbook of the World (New York: McGraw-Hill, 1977).

b) Figures on both "Direct Tax as Percentage of Government Revenue" and "Government Revenue as Percentage of National Income" were collected from Yearbook of National Accounts Statistics (The United Nations, Various Years); the Taiwan data were from China Yearbook, 1963-1975 Taipei, Taiwan: China Publishing Co.).

II. Socio-economic Data (Var. 2 and 3):

The main sources for the composite index of overall development are the following publications of the United Nations:

-Statistical Yearbook, 1960-76
-Demographic Yearbook, 1966-75
-UNESCO Statistical Yearbook, 1970-73
-Production Yearbook, Food & Agricultural Organization, V. 24 (1970) and V. 27 (1973)
-1974 Report on the World Social Situation

III. Policy Indicators (Var. 4, 5, 6, and 7)

a) The primary source for these data is D. Nortman, "Population and Family Planning Programs: A Factbook," Reports on Population and Family Planning (New York: The Population Council, 1969-1980).

b) Program Effort Index (Var. 5) was adopted from R. Freedman and B. Berelson, "The Record of Family Planning Program," Studies in Family Planning (Jan. 1976), Appendix A, p. 39.

APPENDIX C

Zero-Order Correlations Among All Variables

	Var. 1	Var. 2	Var. 3	Var. 4	Var. 5	Var. 6	Var. 7
Var. 1	1.00						
Var. 2	0.57*	1.00					
Var. 3	0.74*	0.53*	1.00				
Var. 4	0.12	-0.15	-0.06	1.00			
Var. 5	0.55*	0.75*	0.52*	0.21	1.00		
Var. 6	-0.04	0.14	0.16	-0.17	0.13	1.00	
Var. 7	0.60*	0.62*	0.74*	0.08	0.81*	0.06	1.00

Note: Coefficients marked with an asterisk (*) are statistically significant at the level of at least 0.05.

Variable Labels:

Var. 1: Index of Political Capacity
Var. 2: Composite Index of Overall Level of Socio-economic Development
Var. 3: Composite Index of Overall Rate of Socio-economic Development
Var. 4: Formal Policy Adoption Score
Var. 5: The freedman-Berelson Index of Program Effort
Var. 6: Extent of /External Assistance
Var. 7: Program Acceptor Rate